Clarion

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No.

Service Manual

Closer Relations through
"Clarion Service Manual"

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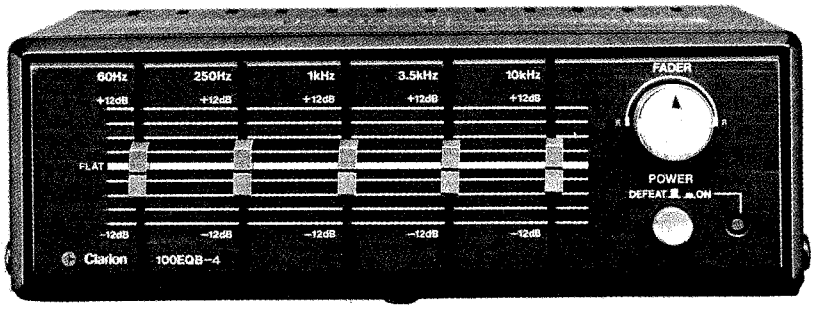
MODEL 100EQB-4



■SPECIFICATIONS:

Power supply voltage	14.4v (10.8 to 15.6v allowable)
Current consumption:	Less than 5 amps
Load impedance:	4 ohms (4 to 8 ohms allowable)
Input impedance:	22 ohms
Input sensitivity:	0.7 v for 1w output/ 3.5v for 25w output
Max. power output:	25w per channel
*Continuous average power output:	15.0w per channel into 4 ohms, 20 to 20,000 Hz, at 1.0%THD
*Frequency response:	20 to 20,000Hz ± 1.5dB
*Signal to noise ratio:	75dB
Dimensions:	width 140mm Height 47mm Depth 131.4mm
Weight:	900g

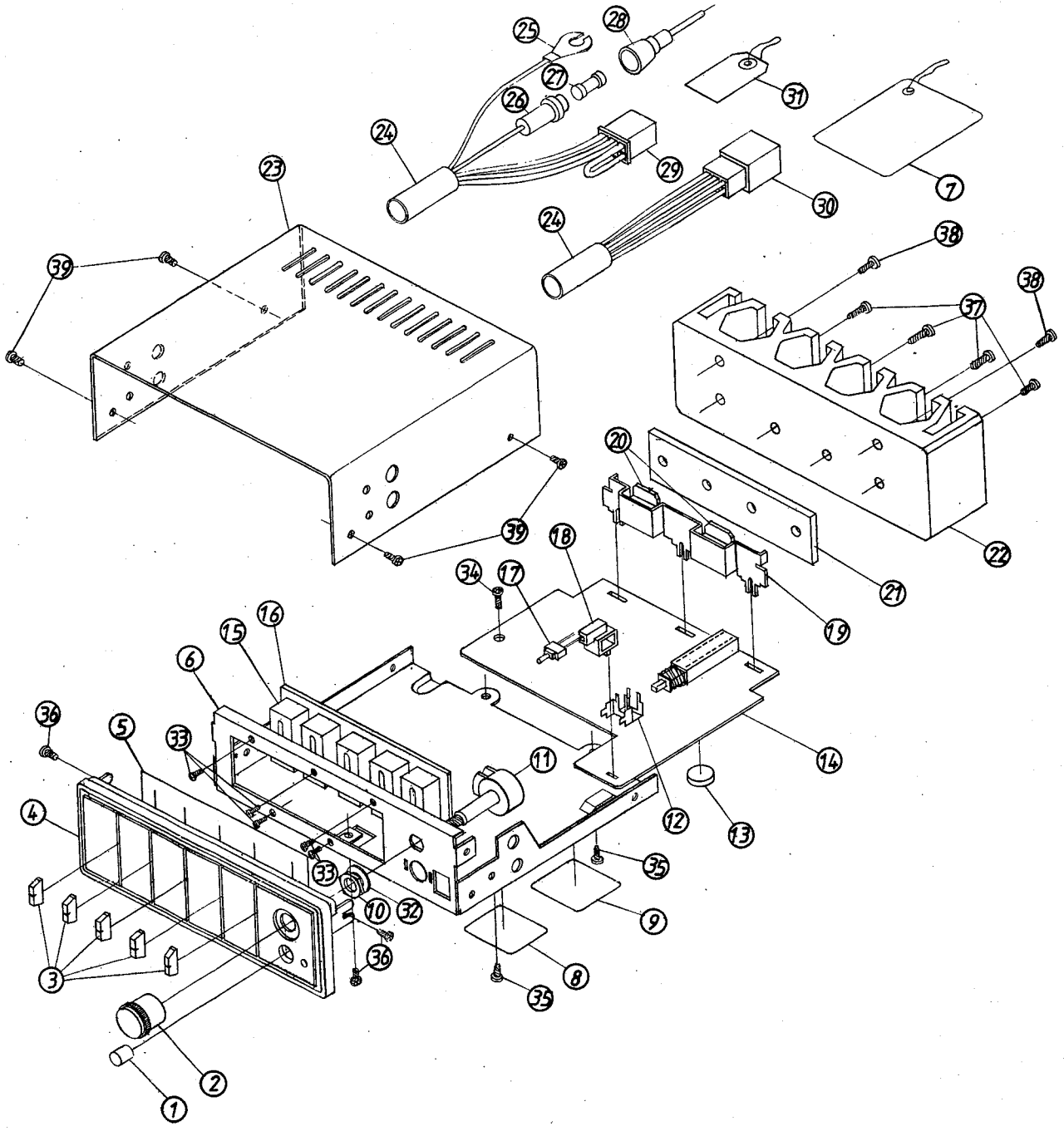
*Marks comply with AD-HOC committee standards.

■COMPONENTS VIEW:

99351-051-0	SP-Lead Ass'y	1
99351-054-0	SP-Lead Ass'y	1
99240-003-0	Gasket	1
99250-002-0	MTG-Bracket	1
99250-011-0	MTG-Bracket	1
Parts bag		
99300-066-0	Machine Screw	4
99300-005-0	D-Sems Hex Bolt	3
99300-006-0	D-Sems Hex Bolt	3
99301-002-0	Hex Ntu	
99302-001-0	Flat Washer	

■EXPLODED VIEW:

◎Main section

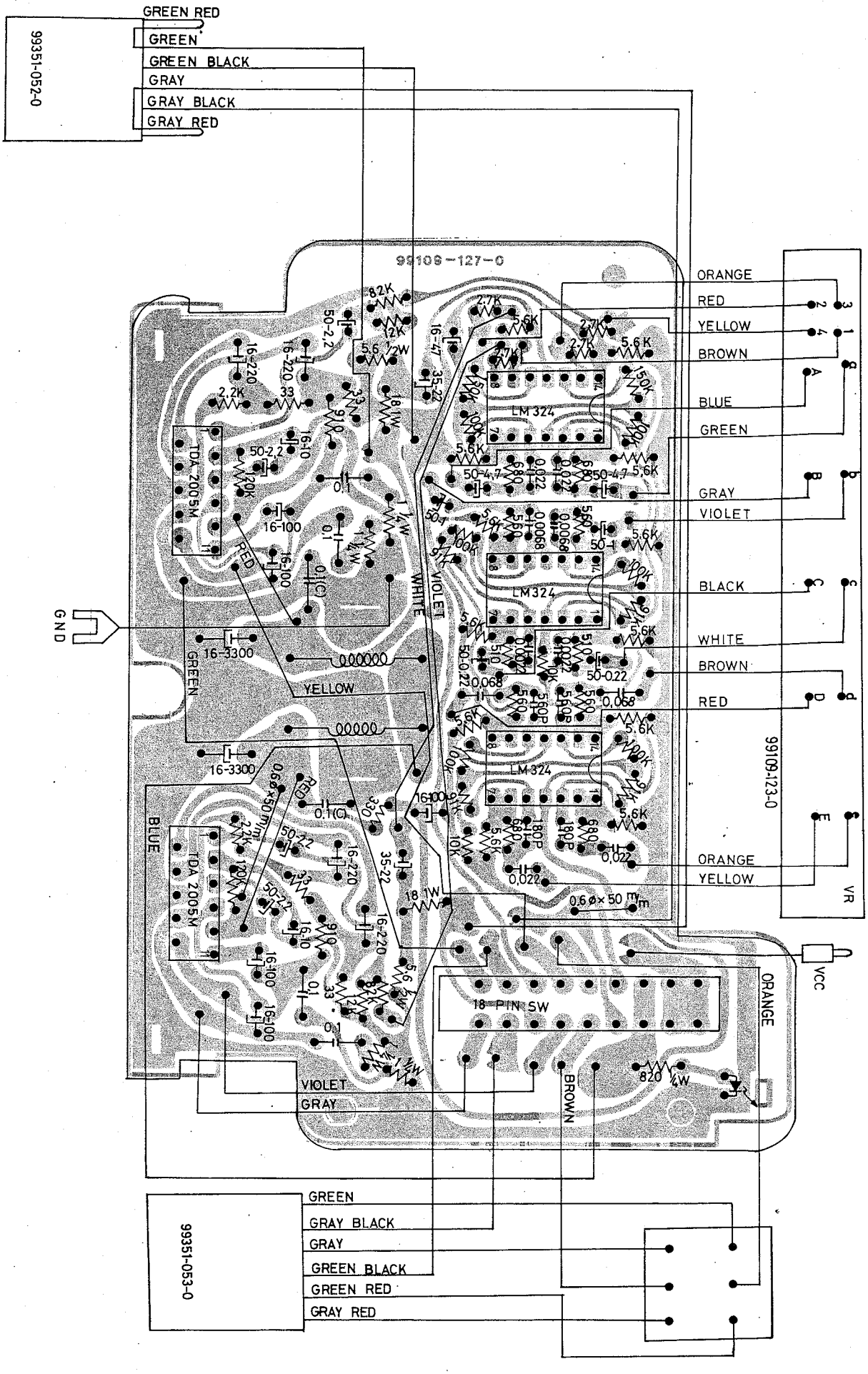


■PARTS LIST:

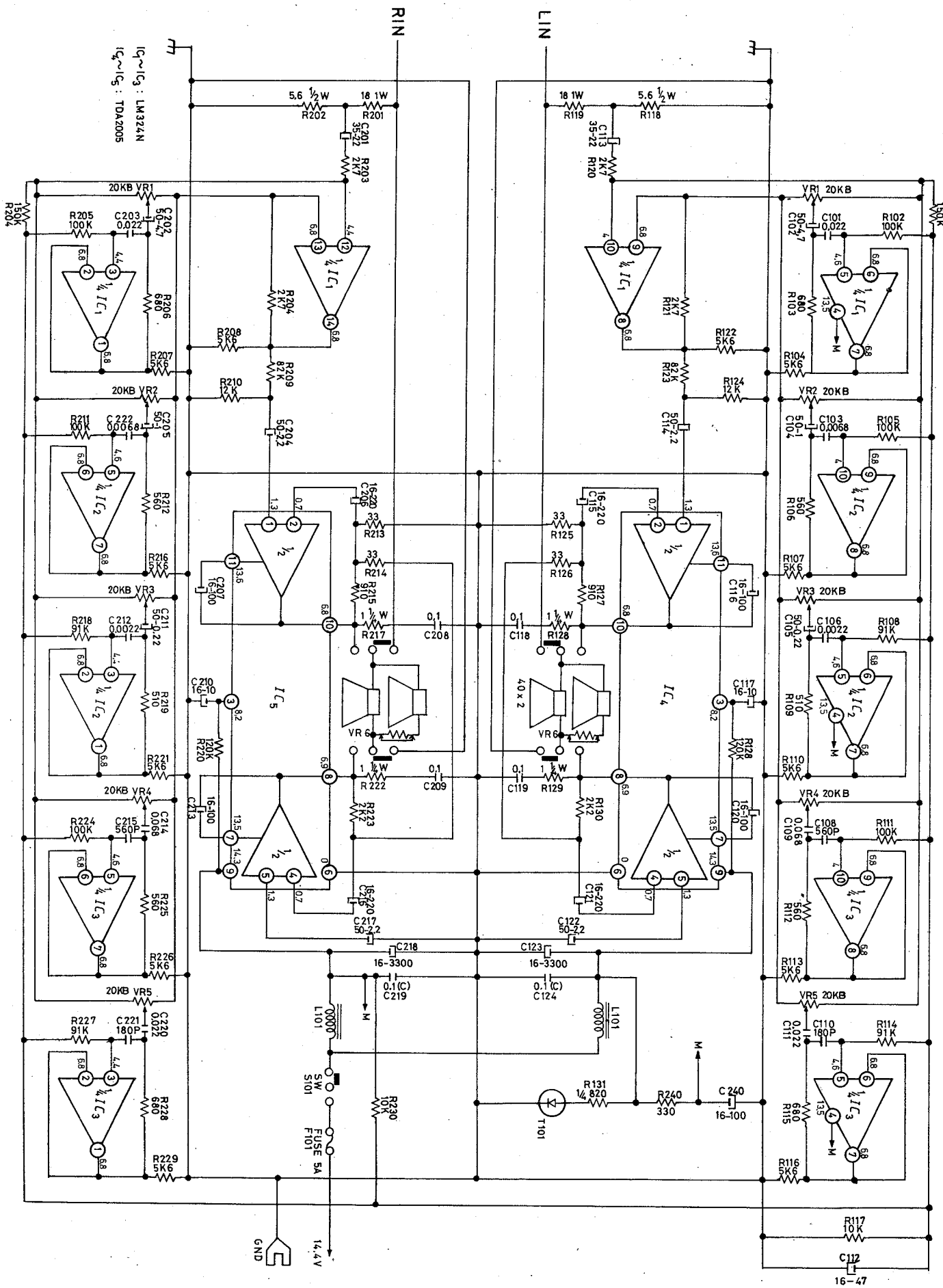
◎Main section

Ref. No.	Part No.	Parts Name	Qt'y
1	99237-029-0	BUTTON	1
2	99236-039-0	KNOB	1
3	99236-038-0	KNOB	5
4	99230-055-0	ESCUTCHEON	1
5	99256-012-0	SHADE	1
6	99252-022-0	LOWER CASE	1
7	99221-045-0	WIRE CONNECTION	1
8	99220-064-0	SET PLATE	1
9	99221-001-0	GUIED LABEL	1
10	99301-007-0	SPECIAL NUT	1
11	99150-070-0	ROTARY V.R.	1
12	99260-121-0	PUSH SW. BRK.	1
13	99262-037-0	RUBBER PART	1
14	99109-127-0	P.W.B.	1
15	99150-008-0	SLIDE V.R.	5
16	99109-123-0	P.W.B.	1
17	99101-051-0	LED	1
18	99263-044-0	LAMP HOLDER	1
19	99260-122-0	IC BRACKET	1
20	99102-039-1	IC	2
21	99254-028-0	HEAT SINK	1
22	99254-027-0	HEAT SINK	1
23	99251-026-0	UPPER CASE	1
24	99263-041-0	P.V.C. SLEEVE	2
25	99352-001-0	BONDING WIRE	1
26	99350-027-0	A-LEAD	1
27	99169-002-0	FUSE	1
28	99350-005-0	A-LEAD	1
29	99351-052-0	SP-LEAD	1
30	99351-053-0	SP-ELAD	1
31	99221-040-0	CAUTION CARD	1
32	99302-005-0	WASHER	1
33	99300-001-0	SCREW	5
34	99300-007-0	TAPTIGHT SCREW	1
35	99300-094-0	TAPPING SCREW	2
36	99300-002-0	SCREW	3
37	99300-090-0	SCREW	4
38	99300-091-0	TAPTIGHT SCREW	2
39	99300-092-0	TAPTIGHT SCREW	4

■PRINTED WIRING BOARD:



■CIRCUIT DIAGRAM:



100EQB-4

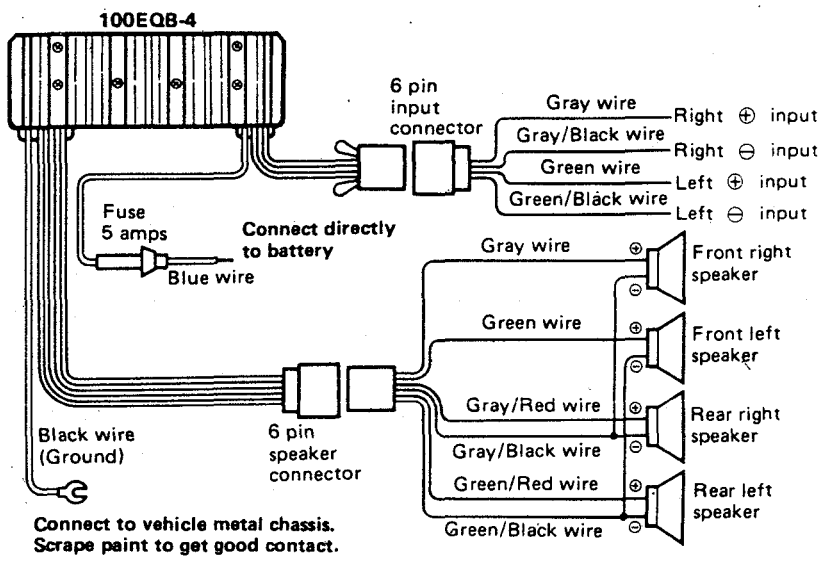
■ PARTS LIST:

◎Electrical section

Ref. No.	Part No.	Description	Q'ty
T101	99101-051-0	LED LT-1204	1
IC1,IC2,IC3	99102-009-0	LM-324N	3
IC4,IC5	99102-039-1	IC TDA2005M	2
VR6	99150-070-0	Rotary VR Center Click 40Ω x2 GF—24	1
S101	99160-005-0	Push SW 18PIN	1
C211,105		Electrolytic-C 50V 0.22uF M RB (ESM)	2
C205,104		Electrolytic-C 50V 1uF M RB (ESM)	2
C202,102		Electrolytic-C 50V 4.7uF M RB (ESM)	2
	99109-123-0 99109-133-0	P.W.B. VR	1
	99109-127-0	P.W.B AMP	1
VR1,VR2,VR3 VR4,VR5	99150-008-0 99150-014-0	Slide VR 20KBx2 Lever 15m/m	5
L101	99154-012-0	Choke EI-24	1
F101	99169-002-0	Fuse 5A	1
	99350-031-0	A-Lead	1
	99350-032-0	A-Lead	1
	99351-051-0	SP-Lead Assy 6 Pin Plug	1
	99351-052-0	SP-Lead Assy 6 Pin Socket	1
	99352-008-0	Bonding Wire	1
R125,126,213 214		Carbon Film-R 1/8W 33 ohm J V	4
R109,219		Carbon Fiom-R 1/8W 510 ohm J V	2
R212,225,106 112		Carbon Film-R 1/8W 560 ohm J V	4
R206,228,115 103		Carbon Fiom-R 1/8W 680 ohm J V	4
R215,217		Carbon Film-R 1/8W 910 ohm J V	2
R203,204,120 121		Carbon Film-R 1/8W 2.7K Ohm J V	4
R130,223		Carbon Film-R 1/8W 2.2K ohm J V	2
R229,226,221 216,207,208 122,116,113 110,107,104		Carbon Film-R 1/8W 5.6K ohm J V	12
R202,118		Carbon Film-R 1/2W 5.6 ohm J P	2
R230,117		Carbon Fiom-R 1/8W 10 K ohm J V	2
R210,124		Carbon Film-R 1/8W 12 K ohm J V	2
R123,209		Carbon Film-R 1/8W 82K ohm J V	2
R218,108,114 227		Carbon Film-R 1/8W 91 K ohm J V	4
R224,221,205 102,105,111		Carbon Film-R 1/8W 100 K ohm J V	6
R128, 220		Carbon Film-R 1/8W 120 K ohm J V	2
R204,101		Carbon Fiom-R 1/8W 150 K ohm J V	2
R222,129,128 217		Carbon Film-R 1/4W 1ohm J V	4
R131		Carbon Film-R 1/4W 820 ohm J V	1
R240		Carbon Film-R 1/8W 330 ohm J V	1

Ref. No.	Part. No.	Description	Q'ty
R119,201		Metal Film-R 1W 18 ohm J P	2
C212,106		Polyester-C 50V 0.0022uF K	2
C103,222		Polyester-C 50V 0.0068uF K	2
C220,203,101 111		Polyester-C 50V 0.022uF K	4
C109,214		Polyester-C 50V 0.068uF K	2
C208,119,209 118		Polyester-C 50V 0.1 uF K	4
C221,110		Ceramic-C 50V 180PF K B	2
C215,108		Cearmic-C 50V 560 PF K B	2
C124, 219		Ceramic-C 25V 0.1 uF Z BC	2
C204,217,114 122		Electrolytic-c 50V 2.2 uF Z RB	4
C201,113		Electrolytic-C 35V 22 uF Z RB	2
C117,210		Electrolytic-C 16V 10uF Z RB	2
C112		Electrolytic-C 16V 47uF Z RB	1
C213,207,116, 120, 240		Electrolytic-C 16V 100uF Z RB	5
C206,216,121 115		Electrolytic-C 16V 220 uF Z RB	4
C218, 123		Electrolytic-C 16V 3300 uF P RB	2
	99531-053-0	SP-Laed 6 Pin Plug	1
	99351-054-0	SP-Lead 6 Pin Socket	1
		Vinyl Coat Wire 00A-100-V	1
		Vinyl Coat Wire 01A-090-V	2
		Vinyl Coat Wire 02A-090-V	2
		Vinyl Coat Wire 03A-085-V	2
		Vinyl Coat Wire 04A-075-V	2
		Vinyl Coat Wire 05A-105-V	1
		Vinyl Coat Wire 06A-105-V	1
		Vinyl Coat Wire 07A-110-V	1
		Vinyl Coat Wire 08A-110-V	1
		Vinyl Coat Wire 09A-100-V	1
		Vinyl Coat Wire 09A-150-Y	1
		Vinyl Coat Wire 01C-090-V	1
		Vinyl Coat Wire 02C-085-Y	2
		Vinyl Coat Wire 03C-075-V	1
		Vinyl Coat Wire 04C-140-Y	1
		Vinyl Coat Wire 05C-140-Y	1
		Vinyl Coat Wire 07C-105-Y	1
		Vinyl Coat Wire 08C-100-Y	1
		Soldercoat Wire 07AS-150-Y	1
		Non-Isnulated Wire 0.6φ x 50m/m	2

WIRING INFORMATION



IMPORTANT:
This amplifier has a floating output system. All speaker leads must be insulated from vehicle and units chassis ground. Improper installation may cause damage to your units or car.

NOISE SUPPRESSION TROUBLE SHOOTING

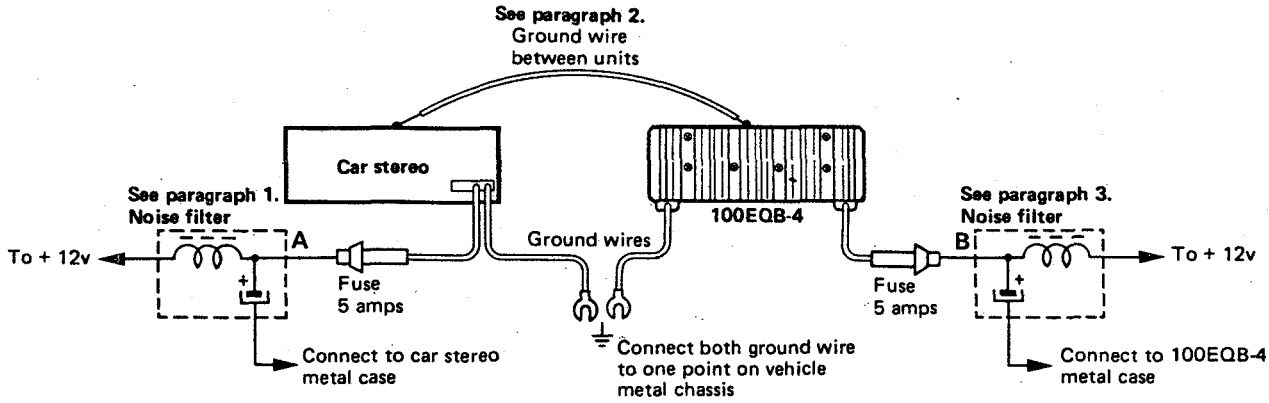
Electrical noise can be a vehicle systems problem. These are basic first steps to suppress noise in any installation and are given in systematic sequence.

First, check all ground connections to be sure they have good tight connections. If any unit is mounted on plastic, be sure there is heavy gage ground lead connected to it. A common connection point to the vehicle chassis is preferred but not essential. Scrape away paint from painted surfaces to secure a good ground.

Good ground connections eliminate noise problem in most installations.

1. With engine running, turn off 100EQB-4, leave car stereo on at minimum volume position and carefully listen for noise - particularly alternator whine. If noise is heard, even extremely low levels:
   A. Check battery posts. If contact is corroded or loose, clean and tighten both terminals.
   B. Weak battery or low fluid. Replace if weak or add fluid.
   C. If battery is OK, install a noise filter (choke and capacitor) rated at 3 to 5 amps in power lead at A.
   Note: Since extremely low noise is amplified by the 100EQB-4, the above steps are very important.
2. If noise is still objectionable with both car stereo and 100EQB-4 on, noise may be caused by a ground loop condition between units.
   To reduce noise caused by the ground loop through the vehicle metal chassis, connect a short heavy gage ground wire between the metal case of the car stereo and 100EQB-4, **This is the most effective way to reduce system noise problems.**
3. If noise is still heard, turn car stereo off and leave 100EQB-4 on. If alternator whine continues, install a heavy duty noise filter (choke and capacitor) rated at 5 to 7 amps in power lead at B.

Noise reduction for a Clarion system is best accomplished by the grounding procedures explained in paragraph 2.



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